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A STUDY OF METRIC CONVERSION OF DISTILLED SPIRITS CONTAINERS: A POLICY AND PLANNING EVALUATION

Final Report on Findings and Lessons Learned

October 28, 1981

For:

The United States Metric Board
Arlington, Virginia

by:

APPLIED CONCEPTS CORPORATION
P.O. Box 2760
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The report presents a brief overview of the major findings from the case study, regarding the actual events, issues, and impacts of the distilled spirits conversion. It traces the impacts of possible USMB intervention strategies under several alternative scenarios, in the context of the distilled spirits conversion. The study assesses the planning guidelines and analyzes the implications for USMB policy and presents a concise summary of findings and "lessons learned" over the course of this project. Consumer survey results are attached in an Appendix.

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FOREWORD

This report is the Task 4 report and final product for "A Study of Metric Conversion of Distilled Spirits Containers: A Policy and Planning Evaluation", performed by Applied Concepts Corporation for the United States Metric Board (USMB). This report summarizes the results for the entire project, which entailed: conducting a detailed case study of the distilled spirits conversion; developing and analyzing a set of hypothetical scenarios regarding the circumstances of the conversion and USMB's possible role in it; assessing the completeness and clarity of USMB's planning guidelines; conducting a survey of consumer awareness of and attitudes toward the conversion; and analyzing the implications of the findings from all the above for USMB policy.

Chapter I of this report presents a brief overview of the major findings from the case study, regarding the actual events, issues, and impacts of the distilled spirits conversion. Chapter II traces the impacts of possible USMB intervention strategies under several alternative scenarios, in the context of the distilled spirits conversion. Chapter III uses the findings of Chapters I and II to assess the planning guidelines and analyzes the implications for USMB policy. Chapter IV presents a concise summary of findings and "lessons learned" over the course of this project. Consumer survey results are attached in an Appendix.

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I. OVERVIEW OF THE DISTILLED SPIRITS CONVERSION

A. INTRODUCTION

This chapter presents a brief synopsis of findings regarding the events, participants, issues, and impacts of the distilled spirits conversion. It highlights some of the key aspects of the conversion* before analyzing, in later chapters, the lessons learned and their implications for USMB policy and planning guidelines

B. MOTIVATION PHASE

The distilled spirits conversion was initiated in the early 1970's by the distilled spirits industry, through the Bureau of Alcohol, Tobacco and Firearms (BATF), U.S. Treasury Department, which has regulatory authority over allowable bottle sizes. The distilled spirits conversion must be seen as a part of the larger conversion of both wine and spirits, which took almost a decade to complete. As early as 1971, the wine industry had unsuccessfully petitioned BATF to restrict imported wines to the same (customary) sizes as allowed for domestic wines. Although most imported spirits were not exempted from U.S. standards of fill (as was the case for wine), the distilled spirits industry also perceived benefits from metrication. The distilled spirits industry publicly presented numerous reasons why it desired to convert but, while important, these did not include two of its main reasons. The publicly stated reasons were: cost savings from increased standardization; the elimination of the competitive advantage and potential consumer deception posed by under-sized imported products; and the promotion of international trade. Two other primary objectives of the industry--which were never stated publicly--were to restructure prices and eliminate unprofitable sizes.

Large internationally active firms, many of which are involved with both wine and spirits, were the driving force behind the conversion. The Distilled Spirits Council

* As presented in detail in "A Study of Metric Conversion of Distilled Spirits Containers: A Policy and Planning Evaluation. Comprehensive Report on the Conversion Process", August 5, 1981, Applied Concepts Corp., Reston, VA. (report to USMB).

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of the United States (DISCUS), the industry trade association, played a key role in unifying the industry. There are three main reasons why DISCUS was successful. First, its membership includes most of the industry. It is the only national distilled spirits industry trade association, and its members account for more than 90% of all spirits sold in the U.S. Second, it is credible with its members. It is perceived to be highly competent in protecting the interests of its members with the U.S. government. Third, it has a large staff and rather large financial resources with which to carry out the planning and coordination functions which were required.

An industry consensus regarding the attractiveness of a metric conversion did eventually evolve through the DISCUS context. It was not a case of a few large firms forcing metrication upon the rest of the industry. In spite of the strong public position regarding the need to convert on the part of DISCUS and many of its members, there were some firms in the industry which were neutral on this issue. None were identified which opposed the conversion. DISCUS was also successful in obtaining support for the conversion from related industries and most other (non-consumer) groups affected by the conversion.

BATF supported the concept of metrication of distilled spirits containers because of a combination of factors. It was already convinced of the appropriateness of metric standards for wine. A dual conversion offered possibilities for inter-industry standardization of bottles with potentially large cost savings. A conversion also offered a large number of other cost savings to industry, which BATF believed would ultimately be passed on to consumers. Most importantly, however, a conversion to metric sizes offered BATF a way to require that imported liqueurs and specialty items comply with U.S. standards of fill (which the U.S. industry also wanted) without requiring them to convert to U.S. measure.

Metrication was a necessary as opposed to merely a convenient mechanism to increase standardization. It was not possible to standardize sizes significantly without addressing the metric question, since BATF refused to require imports to convert to U.S. measure and such a large share of the market (approximately 15%) was taken by imported bottled spirits.

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C. PLANNING PHASE

In the negotiations and discussions on sizes and other aspects of the conversion, each group involved (e.g., DISCUS, wholesalers, importers, etc.) made decisions based on its perceived economic self-interests. The arguments used to support their positions, however, often referred to broader industry-wide or consumer benefits which would result. An example of this are the reasons DISCUS gave BATF for its proposed miniature restrictions: (1) that miniatures are attractive to minors and to those who are tempted to drink surreptitiously while driving and (2) careless disposal of miniatures creates a waste problem. Their major concern, however, was the poor profitability of the miniature size.

In industry discussions, the 750ml size (as a replacement for the "fifth") was selected as the standard size and starting point for determining both larger and smaller sizes, with a variety of size combinations considered. DISCUS modified its proposals to BATF several times, each time gaining wider concurrence by various industry segments.

The final DISCUS petition to BATF was for a sizing scheme of 50ml, 187.5ml, 375ml, 750 ml, 1 liter and 1.75 liters. DISCUS could not overcome the opposition of the airline industry to its proposal to eliminate the miniature size, nor BATF's opposition to its proposal to eliminate sizes larger than 1 liter. BATF proposed a sizing scheme of 50 ml, 250 ml, 500 ml, 750 ml, 1 liter, and 1.75 liters. This was based upon the liter (as a replacement for the quart) as the standard size. BATF called for public comments on the two options (through the Federal Register), and held a public hearing on the matter. Based upon post-hearing testimony from several U.S. and foreign metric groups and consumers who expounded the virtues of a 1-2-5 sizing scheme, and post-hearing information that the European Economic Community (EEC) would select the 200 ml and not the 250ml as a standard size, BATF selected the 200ml instead of the 250ml. The final selected sizes were 50ml, 200ml, 500ml, 750ml, 1 liter, and 1.75 liters.

BATF had no metrication "model" to follow and its staff had no technical training in metric matters. It did not know what procedure to follow or factors to consider in selecting a sizing scheme. It attached great importance to the few

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comments it received from representatives of self-appointed metric groups. Again, these comments generally supported a 1-2-5 sizing scheme, claiming it to be the "optimal" approach and a "true" metric sizing scheme. The results of BATF's selection of the 200ml instead of the 250ml size have probably been negative for both the industry and consumer, due to the 200ml's higher cost of conversion and higher prices.

Consumer input into BATF's decision-making was unplanned and ineffective. BATF employed trade statistics to obtain an understanding of basic consumer size preferences. However, there was no effort to obtain a consensus of consumer opinion on a sizing scheme. BATF relied upon the "metric groups" which commented, individual consumers who commented by letter, and industry testimony. Although no consumers supported the 1.75 liter size, it was accepted by BATF. There was no mechanism established for determining the true consumer size preferences.

The international interface was poorly coordinated. Key information regarding foreign activities came to BATF very late in the decision-making process. As mentioned above, the selection of the 200ml instead of the 250ml size was based partly on information that the EEC was going to establish the 200ml as a standard. The industry did not have a chance to analyze and comment on this. Information on the EEC sizes should have been obtained much earlier and incorporated into the hearing and discussions. Any U.S. concessions on sizes should have been incorporated into broader trade discussions, perhaps regarding the extremely high foreign import duties on U.S. distilled spirits products.

BATF conscientiously operated according to its prescribed policies and procedures to meet its prescribed mission and objectives. However, from the perspective of USMB objectives, its performance was less than adequate in coordinating planning, ensuring consumer input, and coordinating the implementation of conversion.

D. IMPLEMENTATION PHASE

A long phase-in period (3½ years) was established to allow an optimal, planned, least-cost conversion. As bottle molds were amortized and inventories of bottles, caps, and bottle dressings depleted, the new sizes could be gradually phased in. However, it did not turn out this way. The down-sizes (the 200ml, 750ml, and 1.75

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liter--which contained slightly less volume than the customary sizes they replaced), were economically most attractive for the suppliers and, therefore, were phased in first. The down-sizes enabled suppliers to make per-unit-of-volume price increases without raising shelf prices. Up-sizes (the 50ml, 500ml, and 1 liter--which contained slightly more product than before) were phased in much later, near or at the end of the optional period. Thus, there were essentially two conversions--one of the down-sizes beginning immediately after the start of the optional period and one for the up-sizes at the very end of the optional period. This was due to the fact that conversion costs were perceived by firms as being less important than pricing considerations in influencing their profitability.

Foreign producers did not deluge the U.S. market with metric imports during the conversion period. Indeed, due to shipping time and customs bond, as well as the fact that most imports were up-sized, imports generally appeared on the shelves in metric sizes long after U.S. bottled products.

Suppliers were required by BATF regulations to phase in brands on a state-by-state and size-by-size basis. This eliminated many of the competitive disadvantages of the conversion to small suppliers. It also benefitted wholesalers and retailers, since it lessened the chance that they would receive shipments of a brand in both customary and metric sizes. These BATF regulations were helpful, perhaps essential, in ensuring a smooth conversion.

A number of problems arose during the conversion period--some anticipated and others unanticipated. Most stemmed from the extent of regulation under which the industry operates and the number of different regulatory jurisdictions which had to change laws and regulations to accommodate metric sizes. These usually were solved by joint government-industry cooperation. Overall, it can be said that there was adequate "follow through" in this conversion. It was provided by DISCUS. DISCUS monitored the progress of the conversion, identifying solutions for industry-wide problems, and often assisting BATF in implementing the solutions.

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Suppliers developed metric information for consumers around promotions for individual brands, but did not extensively publicize metric sizes per se. BATF provided minimal publicity, writing only a few press releases, and depending heavily on distribution of retail display posters for consumer education.

The distilled spirits industry is not "working metric" in its day-to-day operations. Internal management, planning, and reporting is still based on cases (even though the volumetric contents of cases have changed) or gallonage. Only the containers are in metric measure. External reports, trade statistics, the federal excise tax, most state taxes, and customs duties remain based on customary units. There is no push by the industry to convert state and federal tax bases to metric because of a fear of tax increases.

E. IMPACTS OF THE CONVERSION

The net one-time cost of conversion--estimated in the case study to be approximately \$21 million--was extremely small in proportion to the size of the industry--approximately \$3 billion in expected annual sales in the early 1980's. Label redesigns and premature bottle mold obsolescence accounted for over three-fifths of all one-time costs.

Most suppliers took advantage of the changes being made for the metrication to standardize aspects of their packaging, which resulted in recurring savings. Bottles, labels, and caps were often standardized and bottles reconfigured to contain less glass. Adequate planning time before the optional period helped make this possible. Recurring annual savings to the supplier industry as a whole from the conversion was estimated in the case study to be approximately \$8.5 million. Marketing considerations regarding bottle appearance overrode some major savings opportunities.

The net down-sizing of containers has led to a recurring cost, since more bottles are now required to move the same amount of distilled spirits volume. Estimates of the recurring dollar costs from down-sizing are tenuous, since these impacts are tied in with pricing and marketing changes which occurred at the same time as metrication. However, the recurring cost from down-sizing offsets at least part, perhaps all, of the previously mentioned recurring savings. Suppliers preferred the net down-sizing

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since it allowed them to raise and restructure prices enough, perhaps much more than enough, to offset the costs from down-sizing.

Suppliers' perceptions of the metric conversion of distilled spirits, both as a concept and as to how it was actually carried out, are generally favorable, and in many cases highly favorable. Only among some small firms does there appear to be a lack of a positive perception of the conversion.

The conversion does not appear to have impacted industry structure or competition. It is likely that it has helped improve supplier profitability. Financial impacts upon wholesalers and retailers appear to have been miniscule.

Suppliers used the introduction of the metric sizes to raise per-unit-of-volume prices. For down-sized containers the increases at the time of introduction averaged 5.1%; for up-sized containers the increase averaged 0.5%. The 200ml size exhibited the greatest price increase of any size, at 12.6%. On a volume-weighted basis for all sizes, a 1.6% overall per-unit-of-volume price increase was taken at the time of introduction of the new metric sizes. During and after the phase-in period, suppliers raised overall (volume-weighted) prices of all sizes at approximately 4.4% per year.

The per-unit-of-volume price increases during the conversion were actually less than price increases preceding it. The preceding annual increase was 5.3% on a constant age and proof basis. Also, during and after the phase-in period, suppliers brought the per-unit-of-volume price of the 1.75 liter size in line with that of the 1 liter. Thus, they met one of their main objectives of the conversion--the elimination of the large discount on the "economy" size. It is not clear, however, whether the metrification has influenced the overall level of prices of distilled spirits, or simply affected the timing of price adjustments.

Shelf prices of distilled spirits products before the conversion had risen at very modest annual rates--only 1.7% between 1970-1976 for retail prices as measured by the CPI. However, the relative stability of distilled spirits shelf prices masks a much higher rate of real price increase, considering the reductions in age and proof which suppliers made during this period.

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Distilled spirits suppliers have exhibited a historical tendency to avoid raising shelf prices. Before the conversion they began reducing age and proof to avoid shelf price increases. In this context, the introduction of metric sizes was another avenue to increase effective prices without causing shelf prices to rise substantially more rapidly than the rate to which consumers had become accustomed.

The industry was correct in its assertions that larger containers (e.g. 1.75 liter and above) become more costly on a capacity-adjusted basis. Larger price increases to consumers might have resulted had a 2 liter size been adopted. However, some industry testimony made in support of the 1.75 liter size, such as regarding the bottle production technology termed "double-gobbing", were gross simplifications or "red herrings", not fully addressing the complex issues of bottle size, type, and cost.

As part of the overall metric conversion of all wine and spirits products, the conversion of distilled spirits containers has benefitted the consumer by reducing the potential for size deception from imported products. The consumer must pay a *slightly higher price for the distilled spirits product, but it is not clear that this* ultimately would not have been the case had there been no conversion.

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II. ASSESSMENT OF INTERVENTION STRATEGIES

A. INTRODUCTION

This chapter presents and assesses several alternative scenarios and possible USMB intervention strategies in the context of the distilled spirits conversion. The objective of this chapter is to trace the impacts of possible USMB intervention in this conversion under the hypothetical assumption that USMB and the planning guidelines were in existence and operational at the time. Some of the intervention strategies are within the scope of the planning guidelines and some are not. The intervention strategies analyzed were jointly developed by Applied Concepts and USMB's Office of Research. They include a broad range of actions--some rather obvious, some creative, some minor, and some rather drastic--since we (correctly) suspected that the impacts and implications of even rather obvious or mundane intervention strategies often have very surprising and complex results. Constraints on the resources of USMB were not considered in order to evaluate as wide a range of actions as possible.

The hypothetical but realistic construction of events in this chapter, along with what we know about the conversion as it actually happened, are used as the information base for assessing the USMB planning guidelines and policy in Chapter III. The implications of the intervention strategies under various scenarios are predicted in this chapter on the basis of two factors. First, the project team, in its study of the distilled spirits conversion, was successful in identifying the underlying motives of involved parties and the chain of causation behind events. In effect, an implicit behavioral model of this conversion was developed. Second, the project team has many years' experience in the distilled spirits industry, and is familiar with its history, structure, intra- and inter-industry interfaces, and firm and industry-level operations and decision-making processes.

The intervention strategies and scenarios are presented in the next four sections. The first three analyze intervention strategies under the general scenario of the actual conversion, with BATF having regulatory authority over the sizes and playing a major role in conversion planning and decision-making. USMB intervention strategies in response to lack of consumer participation, to address technological and economic issues, and to address bottle sizes are posited and then analyzed. The fourth scenario

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analyzes several intervention strategies where the conversion is not a regulatory matter and BATF is not involved.

B. USMB INTERVENTION IN RESPONSE TO LACK OF CONSUMER PARTICIPATION

1. Strategy 1 - Public Information Campaign

Probably the most effective intervention strategy for USMB to address the problem of inadequate consumer participation would have been to extensively publicize that planning for a conversion of distilled spirits containers had begun. This intervention should have followed a request to BATF that it take such action and their refusal. The ideal time for such actions would have been early in the planning process immediately after DISCUS' original petition to BATF. Press releases to the general media could have been made informing of DISCUS' petitions, the ongoing conversion planning activities, and soliciting consumer comments, either to USMB or directly to BATF. Since press releases might not have been extensively picked up, this scenario assumes that USMB would have monitored them and, if necessary, made more direct contact with appropriate media to assure adequate dissemination of the information. National consumer groups should have been contacted directly, in any case.

If the public information campaign had been effective in making large numbers of consumers aware of the possible conversion, it is likely that input from consumers and consumer groups would have been rather substantial in volume. However, unless the public information campaign educated them as to the conversion issues, a large portion of the consumer input would be unusable--beyond the conversion's scope or out of the realm of possibilities. Confused consumer input could be misrepresentative of true consumer preferences and could do more harm than good. Thus, the campaign would have to be carefully designed and conducted to elicit appropriate consumer input on relevant conversion issues.

In addition to the problem of obtaining informed and relevant comments, there is another major problem which would have resulted from an extensive campaign to publicize the conversion and elicit consumer input. This is the problem of managing the information. A massive influx of consumer comments and suggestions, even if

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reasonably well informed, would have overwhelmed BATF capabilities to compile and use them. It would be highly desirable if some organization, such as USMB or perhaps a consumer group, would serve as a clearinghouse to screen, tabulate, and present consumer input to BATF in an organized, coherent manner.

The intervention strategy of a carefully designed public information campaign, with a carefully managed information flow to BATF, would most probably have had a major impact on BATF's decision making in this conversion. If the consumer input showed a strong preference for a 2.0 liter size or against the 1.75 liter size, BATF would probably have required substantially greater justification from industry for the 1.75 liter size. Since it is doubtful such justification existed, it is likely that BATF would have selected a 2.0 liter instead of a 1.75 liter size, and may have allowed a size larger than 2.0 liters.

If the consumer input obtained from USMB's (or BATF's or a joint USMB/BATF) public information campaign went against the preferences of the industry, the industry might very likely have mounted their own "consumer input" campaign. By targeting the requests for comment to the right media, they could have generated a sizable volume of comment favorable to their preferences. They also may have conducted consumer preference polls of retailers or consumers. The reported results of such polls would definitely have supported the industry's preferred sizes. BATF decision makers would have been highly skeptical of industry-supported consumer input initiatives, and it is doubtful that they would have had significant impact.

2. Strategy 2 - Public Hearings

Another intervention strategy would be for USMB to hold public hearings to obtain consumer input. Again, this should have followed a USMB request to BATF for such hearings and their refusal. The main problem with this strategy is that it biases the testimony in favor of those individuals and groups with the financial resources to travel to and attend the hearing. Most input would still be in written form. The most effective strategy would probably be to hold several public hearings in different parts of the country, as one aspect of an extensive publicity campaign, as discussed above. BATF might perceive USMB-conducted hearings as an encroachment into its area of responsibility. However, given USMB's role as the lead Federal agency for

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coordinating metric activity, and since the hearings would be for a well-intentioned purpose, that is, for the public benefit, BATF would have accepted them. It would have been prudent for USMB to invite BATF to provide input and a representative for these hearings.

C. USMB INTERVENTION TO ADDRESS TECHNOLOGICAL AND ECONOMIC ISSUES

The objectives of any intervention strategy to address this problem are straightforward--get the facts, report the facts, and see that the facts are actually used in making decisions. Probably the most critically needed outside, objective assistance was on the issue of bottle production costs, especially regarding the 1.75-2.0 liter size range. This related to a specific technological issue, "double-gobbing", as well as other less obvious but probably more important relationships among bottle size, type, and cost. A complicating factor (to be expected in other conversions) was that the time period of concern was the future 5-10 year period, when bottle production technology and costs were expected to be undergoing substantial change.

Individual bottle manufacturers, as well as their trade association, corroborated the distilled spirits industry's testimony that the 1.75 liter size, due to "double-gobbing", was the largest size that could be economically produced. It was said that a size larger than 1.75 liter would result in higher costs for firms and higher prices for consumers. An independent assessment would have probably surfaced all the issues regarding bottle size and production costs, including the marketing and pricing implications of the down-sized 1.75 liter size. The bottle manufacturing industry was willing to carefully package the truth for their customers, the distilled spirits suppliers, but they probably would have responded factually to specific questions.

The only effective intervention strategy for resolving this problem would have been for USMB to hire outside specialists--a consultant or firm--to assess and report on these issues. Again, this should have followed a USMB request to BATF for such actions and their refusal. There would be two main criteria for selecting the consultant or firm for this task; recognized competence and objectivity. There are numerous competent sources available to do this. It would have been somewhat more difficult, but not impossible, to obtain a source which is not only objective, but which

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would also be perceived as objective. This is due to the fact that most such sources are directly attached to or serve either the bottling or distilled spirits industries.

Outside analysis would have identified the "double-gobbing" issue for what it largely was--a "red herring"---and uncovered the many cost, marketing, and pricing issues involved in selecting a sizing scheme. This intervention, combined with the enhanced consumer input from the first intervention, would have brought the important issues out into the open for discussion, and would have resulted in better, more informed decision making by BATF. The two interventions would probably have produced a dramatically improved conversion, from the perspective of USMB objectives.

D. USMB PETITIONS BATF ON BOTTLE SIZES

In this scenario, USMB petitions BATF for a 2.0 liter size instead of the 1.75 liter size (which was preferred by the industry and selected by BATF), and a 250ml size instead of the 200ml size (which was selected by BATF but disapproved of by the industry). The submission of the petition is analyzed for three time periods: before the hearing; after the ruling but before the optional period, and today.

Before the detailed analyses, however, it can be said that, in general, BATF would have given a USMB petition careful consideration, but also careful scrutiny. They would have closely scrutinized the reasons USMB gave for petitioning for the sizes. They would have looked for specific reasons why the USMB's recommended sizes were superior to the alternatives. The stronger the justification for the sizes, and particularly, the greater the documentation of the justification, the more weight BATF would have given the petition in its decision-making process. BATF would perceive USMB as having two kinds of credibility. USMB staff would be perceived as "metric experts", knowledgeable of U.S. and international metric practices and norms. This alone would carry substantial weight. USMB would also be perceived by BATF as being most interested in and knowledgeable of consumer preferences, regarding metrication in general and, perhaps, with some relevancy to this particular conversion. However, statements made by USMB regarding consumer size preferences would have to be documented with evidence for BATF to give them substantial weight. One form

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of documentation could be relevant consumer preference findings from other conversions (e.g., soft drinks in the U.S.) or other nations (e.g., distilled spirits in Great Britain and Canada). Another would be statements by leaders or resolutions of major U.S. consumer groups. The best documentation, in the eyes of BATF, would be the directly stated preferences of large numbers of spirits consumers. The very best documentation would include all the above, combined with a nation-wide survey of spirits consumers, large enough to give statistically significant results.

1. Submission of the Petition Before the Hearing

This would have been the ideal time to petition for the 2.0 liter size. This action alone may have ensured that sufficient consideration was given to alternatives to the 1.75 liter size. As mentioned above, however, for a USMB petition to substantially impact events, it must include the specific reasons for recommending the 2.0 liter and, if possible, specific reasons for preferring the 2.0 liter size over the 1.75 liter and 1.5 liter sizes. Thus, preparing a credible petition package would require a rather detailed knowledge of the industry's cost structure and marketing practices. USMB could expect substantial industry efforts to refute its contentions and would need to be prepared to defend its petition at the hearings and as conversion planning progressed. This is the key reason why USMB must have solid documentation for its recommended sizes. Empirical evidence, such as consumer survey results or price sheets from bottle manufacturers, would be very difficult or impossible to refute, and thus make it very difficult or impossible for BATF not to select USMB's petitioned sizes.

The effectiveness of a pre-hearing petition for the 250 ml size would, again, depend largely upon the strength of the petition. The more documentation and empirical data it contained supporting the size, the more consideration it would receive. At this time, BATF was leaning heavily toward the 250ml size, and USMB's petition would have reinforced BATF's preference for it. However, unless the petition specifically documented the superiority of the 250ml over the 200ml size, it is questionable whether the petition would have deterred BATF from switching to the 200ml later on.

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2. Submission of the Petition After the Ruling but Before the Optional Period

It is doubtful that BATF would have called new hearings, delayed the optional period, or even given much consideration to the petition for the 2.0 liter size, unless USMB showed substantial evidence of overwhelming consumer dissatisfaction with the 1.75 liter size or evidence of bottle size, cost, or price relationships which would contradict or add new information to previous industry testimony. BATF had already acknowledged their awareness that a 2.0 liter size might be somewhat more convenient for the consumer. They had accepted this trade-off to minimize product prices which, according to industry testimony, the 1.75 liter would accomplish.

BATF might have more readily reconsidered the 200ml at this time, however. The industry was astonished and extremely displeased by the surprise selection of the 200 ml size and would have endorsed the USMB petition for the 250ml size. Industry dissatisfaction and comments to BATF were mainly on the production problems and costs, and lack of a market for such a smaller size from the 500ml. USMB comments should have focussed on consumer preferences and pricing implications of down-sizing from the half-pint. Again, considerable effort as well as knowledge of the industry would be required for this.

3. Submission of the Petition Today

BATF would almost certainly not grant or even give serious consideration to a petition for changing either of these two sizes today. The industry has made the conversion and adapted to the new sizes. For the 200ml size, the large content difference from the half-pint required costly new bottle molds and bottling line modifications. Costs were also incurred in accommodating the 1.75 liter size. It would now be especially costly to convert these to a 2.0 liter size since many firms installed new specialized, high-volume bottling lines for the 1.75 liter instead of modifying the old half-gallon lines. BATF would be under great pressure to justify this large cost burden before changing sizes. Industry would fight doggedly for the 1.75 liter size. Overwhelming consumer dissatisfaction would have to be shown with the present sizes to even make a case to BATF for the changes. The recently completed consumer survey shows, however, that this does not exist (see Appendix, page 2).

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E. IF THE DISTILLED SPIRITS CONVERSION HAD NOT BEEN A REGULATORY ACTION

Under this general scenario, BATF has no regulatory authority over bottle sizes or the conversion, and is not involved in the planning process.

It should be recognized that this scenario is a major deviation from the actual circumstances of the distilled spirits conversion. It was largely the regulatory environment which had led to the industry's dissatisfaction with the customary sizes, and which provided a requirement, as well as the mechanism, for resolving these problems by converting to metric sizes. It was also the regulatory environment which over time had led to close intra-industry cooperation on industry-wide matters, through a strong trade association.

The first question to be addressed in the analysis of this scenario is whether the industry would have converted to metric sizes. Given the situation in 1974-75, with the intense and widespread dissatisfaction with some of the customary sizes by industry firms, it is highly likely that bottle sizes would have changed. It is also highly likely that most industry firms would have attempted to move together on this, due to their fear of disrupting the market with a proliferation of sizes. The industry would have probably perceived that it had two choices: to add to the existing customary sizes; or to convert to metric sizes.

In making this determination, industry firms and their trade association would probably work together analyzing the many tradeoffs regarding conversion costs, benefits, and risks. Adding new customary sizes would certainly be the least costly option, but would not produce the many economic benefits of standardization. Most importantly, however, it risked a proliferation of sizes. This could lower bottle run quantities (thus raising costs), decrease consumer size awareness (thus helping imports), and could create a major disruption of the market. Given these concerns, it is highly likely that conversion to metric would have been given serious consideration. If DISCUS and the industry believed they could accomplish most of their key objectives through a metric conversion (either by submitting or not submitting a conversion plan to USMB), this would have been the preferred course of action.

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Under the general scenario, it is highly unlikely that DISCUS and the distilled spirits industry would have voluntarily followed either the letter or intent of the planning principles and guidelines. The distilled spirits sector is probably similar to most others, in that it would not submit a plan to USMB for endorsement if it did not intend to follow, at least to some extent, USMB's guidelines and recommendations. DISCUS and the industry would not have desired to follow the USMB planning guidelines, since they would perceive that to do so could seriously jeopardize meeting their conversion objectives. Many of their objectives were contrary to consumer preferences and objectives. An open planning process with opportunity for all affected parties to provide input could result in a conversion that left the industry no better off, or even worse off, than before. It is conceivable, however, that the industry may have perceived some public relations benefit from submitting their conversion plan to USMB, knowing full well it would not be endorsed (since it almost certainly would not be in conformance). This is particularly true if they believed USMB would not extensively publicize its lack of endorsement.

The more realistic scenario is that the industry would consult with USMB and perhaps other metric groups, but would not relinquish control over the conversion planning process or plan. Their strategy would be to attempt to obtain enough USMB involvement that USMB would not become their adversary or try to stall or substantially impact areas of the plan key to the industry's attainment of its main conversion objectives. They would probably be willing to make concessions on minor issues with the hope that these would appease USMB.

There is also no guarantee that the formal conversion plan that would be publicly released, whether or not it was submitted to USMB, would accurately reflect what would actually happen in either the conversion process or as a result of the conversion. Not only is a conversion plan voluntary, but compliance with a plan by individual firms is also voluntary. One can be sure that any publicly released distilled spirits conversion plan would contain extensive justification for the plan components, including explanations of how consumers would benefit. It would require astute analysts, familiar with the industry, to assess the realism of the conversion process and expected benefits and impacts, as set forth in the industry's conversion plan.

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Realistically, for USMB to impact the actual conversion process and its impacts, it would have to intervene more directly in the planning process than called for in the planning guidelines. Intervention actions could include: "jawboning"; raising and publicizing the possibility of anti-trust law violations; leading or supporting legal actions; and holding press conferences or taking other measures to publicize the inadequacies in the planning process and/or plan. Each of these is analyzed below.

1. "Jawboning"

"Jawboning" would basically entail trying to talk the industry into complying with the guidelines. The only argument to which the industry would be receptive would be that it is in its own self interest to do so. Without at least the implicit threat of more forceful actions, it is doubtful that jawboning would substantially impact events. This is due to the fact that the industry's conversion plan would generate substantial economic benefits for it.

2. Publicity

Other than "jawboning", the USMB might use its option of "going public", as described in the first scenario, to publicize the issue of size selection. Inviting representatives of the distilled spirits industry, retail and distributor organizations, as well as consumer groups to participate in a public hearing might influence the industry to modify its stand in order to avoid unfavorable public reaction.

Whether or not the selection for the 1.75 liter size would in fact have been changed is not clear. However, the public discussion would have focussed attention on the industry's determination to discontinue the price discount on the largest size (half-gallon), and thus eliminated the hidden agenda for the 1.75 liter size--to increase the per-unit-volume price, without increasing the shelf-price.

3. Legal and Quasi-legal Action

Legal and quasi-legal action would take the form of raising antitrust issues, or of requesting an injunction.

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The open discussion of antitrust implications of generating an industry consensus might induce the industry to follow the USMB guidelines. Without the Noer-Pennington exception (which enables firms to combine to address regulatory issues), the industry would be hard pressed to develop a consensus on all the conversion issues without danger of violating at least some portions of the antitrust statutes. If the issue is not raised, however, the industry would probably take its chances. With USMB poised to publicly raise the antitrust issue, there is a good possibility the industry would come into at least partial conformance.

The combined threat of antitrust actions and an extensive, negative publicity campaign would substantially increase the likelihood of industry conformance with USMB guidelines. The distilled spirits industry is very sensitive to public opinion. Negative publicity, especially regarding lack of consumer input, could damage the reputation of individual firms and the industry as a whole. This could also adversely affect firms' marketing efforts and depress sales.

Another possible action would be for USMB to take or support legal actions, such as attempts to obtain a restraining order and/or injunction against the conversion. This intervention might be taken, for instance, after deciding that the industry-selected sizes were detrimental to consumer interests. Because USMB has no regulatory authority over the conversion, it would not have legal standing to legally force industry to modify its selected sizes. It would have to take a public interest position in its argument. However, it would be very difficult to show "imminent harm" from the size selection, which the courts generally require. "Imminent harm" has usually been taken by the courts to mean injury to the health, welfare, or safety of individuals or damage to private property. A temporary restraining order and/or a hearing might be granted, but it is doubtful that the injunction would be granted.

Such legal actions by USMB would probably show little direct results and could have serious, negative, long-term consequences for USMB. Other converting industries may take this as a signal that USMB will take an adversary position in their conversion and thus may avoid USMB and the planning guidelines in their conversions. A behind-the-scenes strategy, where USMB supported consumer groups' legal actions, such as through amicus curiae ("friend of the court") briefs, would probably be a just as effective strategy, and would not thrust USMB into a highly visible role as industry

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adversary. Again, the main impact of these legal actions upon the industry would be negative publicity--to which they would be extremely sensitive. The threat of such legal action from consumer groups, combined with an extensive USMB-sponsored publicity campaign as mentioned earlier, might be enough to induce the industry to consider changing their sizes.

The question of at what point USMB intervention actions or industry loss of control over the conversion would cause the industry to drop the idea of metric conversion is a very difficult one. If the industry had a non-metric conversion option, such as would be the case if BATF had not been involved, it would not take a great deal of USMB interference or opposition affecting key objectives (such as reducing the contents of the largest size) to push the industry into dropping the metrication. Instead of converting to metric, they would have adjusted their customary sizes. Again, compromises would be made, but not regarding the critical objectives. It would be very difficult, maybe impossible, for USMB to know at the beginning of the conversion planning process just what are the critical industry objectives, and in which areas, if any, the industry is willing to compromise. It would be equally difficult to know beforehand what kind or level of confrontation would push the industry into total avoidance of USMB (and rejection of the guidelines) or into dropping the idea of metrication altogether.

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III. ASSESSMENT OF THE PLANNING GUIDELINES AND IMPLICATIONS FOR USMB POLICY

A. INTRODUCTION

Chapter I summarized the issues, participants, events, and impacts of the distilled spirits conversion as it actually occurred. In Chapter II, the knowledge of the conversion and of the spirits industry in general was used to answer a set of "what if" questions regarding circumstances of the conversion and USMB intervention actions. This chapter assesses USMB's Private Sector Metric Conversion Planning Guidelines in light of these results. It also discusses certain policy implications regarding the application of the planning guidelines and of the selection of alternative intervention strategies.

The assessment of the planning guidelines is in two parts. First, a technical assessment of the guidelines is presented which focusses upon their completeness. The planning guidelines are not detailed instructions for writing conversion plans but, rather, establish general objectives and procedures, and checklists of factors which USMB recommends be considered in the conversion planning process. The technical assessment, in essence, addresses the degree of completeness of the procedures and checklists. The second part of the assessment of the planning guidelines addresses their clarity and ease of use by a converting sector.

B. TECHNICAL ASSESSMENT OF THE PLANNING GUIDELINES

No major technical problems or gaps were found in the planning guidelines. They address all major areas of concern in planning for the distilled spirits conversion, under the actual circumstances as well as under the alternative scenarios that were analyzed. In keeping with the objective of the guidelines to provide general as opposed to specific, guidance and direction, only three areas were identified where modifications to the guidelines would be prudent. These are discussed below. First, however, it is emphasized that these are areas in need of strengthening, not radical overhaul. No serious gaps or contradictions were found.

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1. Prioritization of Conversion Objectives

The planning guidelines (mainly in Section 504.11) discuss in detail the importance of defining collective objectives and interests and provide general guidance as to their content and how to establish them. From the distilled spirits experience, however, it is apparent that merely establishing conversion objectives, while essential, is not enough to ensure that the interests of involved and impacted parties are kept in perspective and accommodated throughout the conversion planning and implementation process. It would be useful to also prioritize the objectives. Probably few, if any, conversions can expect to meet all their objectives--trade-offs will have to be made. Good planning and decision making require a knowledge of the relative importance of the conversion objectives so that when trade-offs must be made, the least important objectives are sacrificed first.

It is recommended, then, that the planning guidelines briefly discuss the issue of trade-offs, and recommend that the relative importance of conversion objectives, including impact objectives, be identified early on in the planning process. An example of the specific wording which could be added to the guidelines (perhaps at the end of Section 504.11(b)) is as follows:

"In setting objectives, involved and impacted parties should be aware that it may not be possible to realize all objectives. Decisions on which objectives to accomplish and which to sacrifice may have to be made. It is important to establish early in the planning period, a consensus not only of the objectives but the relative importance of the objectives so that later, if trade-offs must be made, the least important objective will be sacrificed first. This is important for both scope objectives and impact objectives."

2. Monitoring Plan Development

In an active sector, there will probably be major deficiencies in documenting the ongoing planning process, as well as in the documentation provided with the completed plan. The voluntary status reports, even if conscientiously prepared, will probably not accurately and adequately inform USMB of all important events, issues, and problems being encountered. Also, only by continuously monitoring the sector's planning process can USMB realistically expect to be able to make an

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informed decision as to the adequacy of the plan which results. There will be much detailed and complex information on issues, participants, motivation, problems, barriers, industry practices, and other factors that can only be learned over time through close contact with the planning process. There may be substantial conflict among involved parties and give-and-take on numerous issues. In an active sector, it would be highly desirable for a USMB observer to attend all important meetings and discussions in order to obtain an in-depth and impartial understanding of what transpires. This will help USMB in meeting its conversion status monitoring and reporting responsibilities and in assessing the adequacy of the plan when it is submitted. The most effective strategy for performing the monitoring function would be to identify one or two USMB staff early on in the planning process as responsible for monitoring each active sector, and to have these same individuals remain in this capacity throughout the planning and implementation phases.

Given USMB staff and resource constraints, however, the desirability of increased monitoring must be weighed against the desirability of other USMB activities, that is, its opportunity cost. As planning activity within a sector increases, monitoring could require a substantial amount of staff time. We recommend that USMB consider the desirability of a more substantial monitoring role, in the context of its total responsibilities.

If USMB should make such an internal commitment, it could take either of two courses of action regarding modifying the planning guidelines. It could leave them as they now stand or it could modify them to reflect USMB's enhanced role. The guidelines currently place the substantial burden of status reporting and documentation solely with the converting sector and posit a minimal, optional monitoring roll for USMB. The advantage of not changing the guidelines is that it would not commit USMB to a large level of effort, which may not be needed in every conversion. The main disadvantage of this strategy is that prospective converting sectors may be discouraged from complying with the guidelines or submitting their conversion plans to USMB. This would be due to (what would then be) an unrealistic perception of the magnitude of formal reporting and documentation required to satisfy USMB.

Alternatively, a spectrum of options is possible by involving USMB personnel in the planning process to the extent resources permit, and correspondingly reducing the

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formal reporting requirements. Several minor modifications to the wording in the guidelines might be made to more accurately reflect the increased monitoring role USMB may be willing to undertake. The advantages and disadvantages of doing this are the converse of making no changes. It would alleviate some of the fears of converting sectors that they could never provide enough information and substantiation to USMB, but could commit USMB to a level of effort that it ultimately would not be able to deliver. Whether or not it made changes to the guidelines, USMB would conduct more monitoring and reap the benefit of being better able to assess the adequacy of submitted plans and the process by which they were developed.

If USMB were to decide to modify the guidelines to reflect the change in monitoring approach, there are only two sections which need to be changed. The first sentence in Section 504.29 might be changed from:

"Members of the U.S. Metric Board and staff may attend committee meetings and other metric-related functions for the sole purpose of observation or education, time and resources permitting"

to:

"Members of the U.S. Metric Board and staff will attend committee meetings and other metric-related functions for the purposes of observation and education, time and resources permitting."

USMB may wish to change the second sentence in Section 504.3(a) from:

"But the USMB cannot attend each meeting and, therefore, must rely on timely reports to gather the information necessary to do its job."

to:

"While the USMB will make substantial efforts to monitor the progress of active sectors, resource constraints may preclude USMB attendance of each meeting of each sector's conversion committee. For this reason, USMB may rely on timely status reports from committee secretariats."

3. Strengthening Implementation Monitoring

After the implementation stage begins, there will likely be a strong tendency to disregard monitoring since the conversion will then be largely a fait

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accompli, and groups capable of monitoring may reap little or no benefit from doing it. However, it is quite likely that unforeseen problems will arise during the implementation phase which require resolution by individual groups or by consensus. The guidelines specifically address these issues (in Section 504.39(d)2) but could be made more effective through a few minor modifications. The guidelines could recommend that the monitoring and implementation outline identify: the specific data sources which will be used to track the conversion's progress; the specific feedback mechanisms which will be used to ensure problems are identified; and the general mechanism or procedure for problem resolution. To Section 504.39(d)2:

"The USMB suggests the development of a monitoring and implementation outline which indicates who has steering responsibility for the conversion plan, especially if it is not the original conversion committee. Most importantly, the outline should establish a feasible means to measure the performance of the sector as it moves toward and through the metric transition, and periodic review and update of the plan throughout the conversion period. This may be accomplished in a variety of ways, including survey reports or any other data gathering system proposed by the committee."

might be added:

"It is important that the monitoring and implementation outline be as specific as possible. It is recommended that it identify the specific data sources which will be used to track the conversion's progress; the specific feedback mechanisms which will be used to ensure problems are identified; and the mechanism or general procedure for problem resolution."

C. ASSESSMENT OF THE GUIDELINES' EASE OF USE

As discussed above, the guidelines are essentially adequate in scope and content to do the job they were designed to do, namely, to establish general objectives and procedures, and checklists of factors which should be considered in the conversion planning process. After a detailed reading and analysis of the guidelines, the distilled spirits industry probably would have asked USMB to explain to them in more detail the role of USMB in conversions and the purpose of the planning guidelines. A major source of confusion would probably be that the guidelines go into substantial detail in certain areas, and in some cases, even layout step-by-step procedures, but were not

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meant to be a detailed operational guide for conversion planning. The industry reader will interpret the section labeled "Planning Principles" as the general guidelines, and look to the "Private Sector Metric Conversion Planning Guidelines" for detailed guidance on how to accomplish a conversion in conformance with the Planning Principles and USMB objectives.

In their current form, the guidelines are not suitable for use as step-by-step instructions for conversion planning. In order to facilitate compliance by industry, it would be useful to have supporting documentation to the guidelines which make it easy for industry to know the extent to which it was in fact complying with the guidelines. What is needed is detailed operational guidance to help converting sectors proceed step-by-step through the planning and implementation of a conversion. Such a document need not strive for the completeness of the guidelines themselves, but should focus on major elements of compliance, referring to the guidelines as needed.

The overall design perspective might be that of a "how to" manual, with requirements that would be optimal, but realistic. *It should be developed* so that if a sector followed the manual, its plan and planning process would be in good conformance with the guidelines. Each step in the planning process should be discussed in its temporal order of sequence, independently from the others while also showing the interrelationships with the next step. It would be useful to include a PERT chart or flowchart which depicts the different steps and flow of events visually. The text should be as short and concise as possible, written in "user-friendly" terms and format. It should explain what to do and how to do it. There should be no attempts at justifying the procedures or other contents of the manual.

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IV. SUMMARY OF FINDINGS AND LESSONS LEARNED

I. INTRODUCTION

In this final section, the key lessons learned from the study of the distilled spirits conversion and concomitant analysis of the guidelines are presented in concise paragraphs.

II. LESSONS LEARNED

A. EFFECT OF MARKET FORCES

Regardless of the planned timetables and original motivation, actual implementation of metrication will be controlled by perceived market factors.

This was very evident in the case study, where a three-year planned phase-in resulted in two *brief flurries of implementation*. The first flurry, at the very beginning of the period, was in the down-sized containers, which allowed a price increase. The second, at the very end, was in the up-sized containers.

B. ADAPTABILITY

Regardless of the adequacy of the planning, the actual implementation will uncover problems which had not been foreseen. The plan should include provisions for resolving such unanticipated difficulties.

In the case study, many questions regarding state laws and regulations, case-packings interstate shipments, etc., arose which were resolved on the spot by BATF and DISCUS.

C. CONSUMER IMPACT

Industry, even when working with a regulatory agency, cannot be relied upon to explore the impact of the conversion on consumers very deeply or invest time and money on finding and implementing ways of minimizing this impact.

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D. WEIGHT OF THE EVIDENCE

Conversion is an activity which occurs within the context of the market place and private interests. It must, therefore, be expected that all evidence submitted, including economic and technological evidence, will support the market or private position of the originator. Hence, when the evidence appears to deprecate the interest of one or the other party in the conversion, it should be carefully examined for completeness.

Examples of this in the case-study are the "double-gobbing" issue and the disregard of the increase in bottle costs of the down-sized containers. In addition, some of the evidence submitted by "metric experts" was of dubious reliability at best.

E. MAINTENANCE OF COMPETITION

Some features of conversion may tend to favor the competitive position of certain participants over that of others. Within the restrictions of the anti-trust laws, this is part of the market mechanism. However, in planning, there may be important impact areas to highlight, particularly for small business.

In the case study, BATF protected the market position of smaller suppliers by changing the original requirement to convert a plant at a time in any size, to convert a state at a time in any size. This eliminated the disadvantage single plant firms would have been under in supplying both types of sizes to converted and unconverted states.

F. INTERFACE WITH INTERNATIONAL TRADE

The implications of a conversion for international trade are apt not to be fully considered. While the immediate trade position of participants, both as regards export opportunities and import competition, are likely to be fully analyzed, the opportunity of bargaining about related tariff and non-tariff matters is likely to be lost.

In the case study, BATF did not initially consider the EEC standardization initiatives, though industry did. Both parties failed to explore possibilities of reducing high foreign tariffs on a quid pro quo basis.

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G. LEVEL OF IMPLEMENTATION

While the planning for metrication was made at the highest corporate levels, the technical planning for implementation and the actual implementation were performed at the operating level.

The involvement of top management was due to the fact that the industry is highly regulated, and to the fact that sizing of containers is a key marketing issue, requiring top level clearance. In industries in which the size of the product is less vital to its market position one might expect the entire process to occur at a much lower level.

H. COST OF CONVERSION

The actual costs and savings of the conversion are small fractions (<1%) of total costs or revenues.

I. ADEQUACY OF GUIDELINES

The guidelines are essentially adequate to support USMB's options for safeguarding the interests of all participants and affected parties in conversion planning.

J. USMB INTERVENTION OPTIONS

In exercising its role, the most effective options for USMB are those which elicit the positions of interested and affected parties and publicize the results.

K. OPERATIONAL GUIDANCE FOR PLANNING

In their current form, the guidelines are not suitable for use as step-by-step instructions for conversion planning. In order to facilitate compliance by industry, it would be useful to have supporting documentation to the guidelines to help industry know the extent to which it was in fact complying with them. Detailed operational guidance to help converting sectors proceed step-by-step through the

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planning and implementation of a conversion, would be of great utility in helping industry comply with the guidelines.

L. ENHANCED USMB MONITORING

Much of USMB's role is based upon the concept of reviewing industry-provided documentation. It was found in the case study that such documentation is likely to be fragmentary and incomplete. This is due to a variety of reasons:

1. *Much information will be company confidential.*
2. Many contacts are informal, and not carefully recorded.
3. The negotiations and "horsetrading" that occur are complex and allusive. Even if the final decisions are recorded, the key positions of participants may not be.

In view of these considerations, a range of options involving USMB personnel as observers in the planning process should be considered.

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APPENDIX

CONSUMER SURVEY FINDINGS

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CONSUMER SURVEY FINDINGS

A. SURVEY DESCRIPTION

This report presents the findings of a telephone interview survey conducted among a probability sample of 2,006 adults, 18 years of age or over, living in private households in the continental United States. The interviewing was conducted during the period July 7 through August 8, 1981. The interviews were conducted by Opinion Research Corporation (ORC). The survey questionnaire was developed by Applied Concepts Corporation with the assistance of USMB Office of Research staff.

B. SURVEY OBJECTIVES

This survey had four objectives:

1. To determine the extent and level of awareness of the existence of metric distilled spirits containers.
2. To determine prevalent consumer attitudes regarding metric distilled spirits containers.
3. To determine the extent of consumer confusion over the metric distilled spirits sizes.
4. To determine how consumers learned about the metric distilled spirits sizes.

C. SUMMARY OF FINDINGS

The findings for each objective are summarized below.

Objective 1: **To determine the extent and level of awareness of the existence of metric distilled spirits containers.**

Distilled spirits purchasers are not "thinking metric" regarding distilled spirits container sizes. When asked what size or sizes they normally buy, only 10% responded in metric measure. However, more than one-quarter (27%) of those who gave the sizes

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they buy in customary measure responded to a mild probe so as to indicate that they are aware they are actually getting metric sizes. Thus, approximately one-third (34%) of all spirits purchasers are actively aware that spirits are sold in metric-sized containers.

When the two-thirds (66%) of all spirits purchasers without an active awareness of metric spirits sizes were directly asked whether they were aware of metric sizes, approximately three-fifths (59%) answered affirmatively. This raises the percentage of spirits purchasers with at least a "recall" knowledge of the existence of metric sizes to 73%. Based upon the results of this survey and our past experience with distilled spirits consumer purchasing practices, we interpret these figures as indicating that the percentage of consumers who consciously maintain a metric awareness in making purchase decisions is between 10% and 34%. We conclude that the extent of awareness of the existence of metric distilled spirits containers is moderately high, but that the level of awareness, and thus the degree that the metric knowledge is used in making purchase decisions, is substantially lower.

Objective 2: **To determine prevalent consumer attitudes regarding metric distilled spirits containers.**

Spirits purchasers appear to be generally satisfied with the available metric container sizes. Only 5% of spirits purchasers stated they were not satisfied with the available sizes. Only 14% had difficulty making price comparisons, which possibly could have been due to the metric sizes.

Objective 3: **To determine the extent of consumer confusion over the metric distilled spirits sizes.**

The word "confusion" here was taken to be represented by the extent to which consumers know the metric sizes.

The bulk of spirits consumers do not know the amount of contents of the products they buy. Overall, at least 78% of spirits purchasers do not know the amount of contents of any spirits product they purchase. At least 50% of all metric-aware respondents, and 63% of all respondents, did not know any of the six allowable

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distilled spirits sizes. 81% of those who initially gave a customary size for the size they buy but later evidenced a metric awareness, did not know the metric equivalent for any size they buy.

Objective 4: **To determine how consumers learned about the metric distilled spirits sizes.**

Reading the metric contents on the bottle or label appears to have been the most common means of learning about the metric sizes. 42% of all metric-aware respondents learned of the metric sizes in this manner, while 19% learned of them at the liquor store, 15% from newspapers, and 27% from other miscellaneous sources.

It should be noted that these findings have several important limitations. They reflect the effectiveness of the various information dissemination media only to the extent that they were actually used. They also do not shed light on the adequacy of the information dissemination efforts that were made in this conversion. Finally, they involve recollections that go back up to four years and thus may not be entirely accurate. They should be interpreted as how respondents remember they learned of metric sizes.

D. SURVEY RESULTS FOR EACH QUESTION

The following paragraphs review the results for each of the 10 questions which were asked in the survey. They focus on the aggregate group of respondents and do not analyze differences across demographic, locational, or other subgroupings. For almost all questions, there was a very high correspondence of results across subgroupings.

- Q.1. Almost half (48%) of all survey participants reported they purchase distilled spirits.
- Q.2. When asked what sizes they normally buy, 90% of all spirits purchasers gave their reply or replies in customary measure only. Only 10% responded in metric measure. Approximately 4% gave both metric and customary sizes. The most frequently given customary sizes were: "fifth" (49%), quart (27%), pint (16%), and half-gallon (11%). The only metric sizes given were: liter (7%), 750 ml (2%), 1.75 liter (2%), and 500ml (<1%).

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- Q.3. 91% of all spirits purchasers stated they were generally satisfied with the bottle sizes available. Only 5% were not satisfied. 4% had no opinion.
- Q.4. Of those that were not satisfied with the sizes available, the most frequently given reasons were as follows: 23% did not like metric sizes; 22% wanted a larger size; 12% had difficulty making price comparisons; 10% wanted more sizes; 7% wanted a smaller size; and 29% gave numerous uncategorized reasons.
- Q.5. Only 14% of all spirits purchasers stated they had either a lot (4%) or some (10%) difficulty in making price comparisons between different sizes of the same brand. 20% stated they had not much difficulty, 38% stated that they had no difficulty at all, and 26% stated that they do not try to make price comparisons.
- Q.6. Of the 90% of all spirits purchasers who responded in customary measure only when asked what size(s) they buy in question 2, 27% mentioned the change to metric sizes when asked if they had noticed any changes in liquor bottle sizes in the past several years. Thus, 34% of all spirits purchasers either answered in metric measure initially or evidenced an awareness of the existence of metric sizes after a mild probe.
- Q.7. When the respondents who gave customary sizes (only) for the sizes they buy in question 2, and who did not respond to the mild probe in question 6 with a metric awareness, were asked directly if they were aware that spirits are now in metric sizes, 59% said yes.
- Q.8. The predominate means by which metric-aware respondents stated they became aware of metric sizes was by reading the bottle label (42%). 19% stated they became aware of metric sizes from displays, brochures, or orally at the liquor store, 15% from newspapers, and the rest from other sources or didn't remember. Mail, family/friends, radio/television, and school/educational means each had only a few percentage points.
- Q.9. Respondents who gave the size(s) they buy in question 2 in customary measure only but who later evidenced they were aware of metric sizes were asked to give nearest metric "equivalent" size for each size they buy. 81% gave either all incorrect answers or stated they did not know any. 15% gave the correct metric "equivalent(s)", and 4% gave some correct and some incorrect.
- Q.10. When metric-aware respondents were asked to list as many of the metric sizes as they could, 58% gave either incorrect sizes or stated they did not know any. The most commonly

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recognized size was the 1 liter, with 39% recognition, followed by the 500 ml and 750 ml (10% each), the 1.75 liter (8%), and the 50 ml and 200 ml (1% each).

E. OTHER FINDINGS

1. 73% of all spirits purchasers showed at least some evidence of an awareness of the existence of metric sizes.
2. For all distilled purchasers:
 - a. 10% gave sizes they buy in metric measure.
 - b. 24% gave the sizes they buy in customary measure only, but evidenced a metric awareness after a mild probe.
 - c. 39% gave the sizes they buy in customary measure only, did not respond to the mild probe with a metric awareness, but answered affirmatively when asked directly if they were aware that distilled spirits were sold in metric containers.
 - d. 27% evidenced no awareness of the existence of metric sizes.
3. At least 78% of all spirits purchasers were unaware of the amount of contents in the containers they purchase.
4. At least 63% of all spirits purchasers did not know any of the 6 allowable metric container sizes.
5. At least 50% of all metric-aware respondents could not name any of the 6 allowable metric container sizes.

IMPORTANT NOTE

There is some confusion about the role of the U.S. Metric Board and the national policy on metric conversion

Congress established the Board to plan and coordinate the voluntary increasing use of the metric system. It is not, however, the role of the Board to promote metric usage.

The Board is an independent Federal agency responsible for conducting public information and education programs and appropriate research, coordination and planning activities.

Metric Conversion in this country is voluntary. When Congress passed the Metric Conversion Act in 1975 it did not make conversion mandatory; nor did it establish a target date or deadline for conversion.

The Board has no compulsory power. It is a public service agency consisting of citizen representatives from all walks of American life. Its 17 members are appointed by the President and confirmed by the Senate. Members are nominated to represent labor, retailing, small business, industry, construction, state and local governments, science, engineering, consumer groups and the public at large.

Please contact us if you have any questions about the role of the Board or the national policy on metric conversion.



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